

Lesson Study

MaTHink
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What Research Says

- Professional Development (PD) is a tool that contributes to a school's vitality.
- PD is not an isolated task but complements thoughtful school improvement planning.

-Powerful Designs for Professional Learning (2004), NSDC

Essential Features of PD

- It is centered around the critical activities of teaching and learning.
- It grows from investigations of practice through cases, questions, analysis, and criticism.
- It is built on substantial professional discourse that fosters analysis and communication about practices and values in ways that build collegiality and standards of practice.

-Ball and Cohen, 1999

What is Lesson Study?

- Take a moment and jot down some thoughts about what you think lesson study is.
- Who would be involved?
- How much time would it take?
- What would you "study" about lessons?

Lesson Study IS

- Teacher-led, ongoing professional learning.
- Conducted with a common overarching goal (Research Goal).
- Focused on subject content in the context of student thinking.
- Informed by outside expertise through knowledgeable others.

Lesson Study is NOT

- Lesson planning
- About creating a perfect lesson or creating them from scratch
- About "watching" a teacher and/or creating a rigid script
- Done in isolation
- Doing just one lesson study cycle

What makes lesson study unique?

- It is teacher-led, and long-term.
- It is planned collaboratively through intensive study.
- It supports a collaborative focus on student thinking through observation of classroom practice in real time.
- It fosters shared reflection based on classroom evidence.
- It offers a process that makes concrete, in an actual lesson with actual students, a goal for learning.

Who Is Involved?

Teachers:

- Gather as a team to work together long-term
- Discuss goals for students and content
- Research
- Study available lessons
- Build research lesson

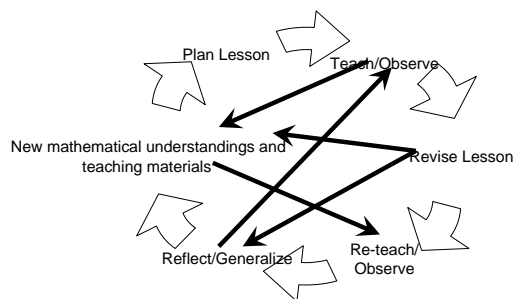
Facilitator:

- Part of the team long-term
- Maintain coherence in planning
- Focus on how the lesson will meet research goals
- Establish an environment of collaboration

“Knowledgeable Other”

- Can be called in by the team to add value to the LS
 - Content expertise
 - or
 - Instructional knowledge
 - or
 - Provide a fresh perspective to the team
- Push teachers to think more deeply about content and pedagogy

The Lesson Study Cycle



Planning Phase

- Teachers create a year-long goal, incorporating a content and behavioral component.
- Teachers increase content knowledge as they study, solve and discuss problems.
- Teachers improve their “eyes to see students” by anticipating students’ thinking.
- Teachers develop stronger networks so they can better use other’s knowledge and resources.

Please see the Lesson Plan template, from Vineyard Elementary.

The Research Lesson(s)

It is essential that all observers remember that they are NOT observing the teacher; they are observing students’ interactions and responses to the lesson!

The Research Lesson(s)

- Helps teachers deepen their own thinking about the issues involved.
- Becomes a written account of the team's work.
- Becomes a good resource for further improvement of the lesson/teaching a concept.

Debriefing

The heart of lesson study is the discussion of the data collected during the research lesson.

Revising and Re-teaching

- Based on evidence, discuss possible changes to the lesson to increase effectiveness. This may involve more research.
- Edit the lesson
- Anticipate student responses
- Review data collection plan
- Re-teach revised lesson

The Reflect/Revise Phases

- By looking closely at student learning, teacher's motivation to improve instruction and their sense of efficacy increase.
- By hearing other teachers' observations, teachers improve their ability to see lessons from a student's point of view.
- By analyzing student work, teachers are better able to judge the effectiveness of teaching strategies with their own students.

-UC Davis Mathematics Project, 2008

Where do we start???

- Identify a group/team that is excited about this process!!!
 - Who will facilitate? Will it change from cycle to cycle?
 - Who will act as the "knowledgeable other"?
- Determine logistics:
 - How many cycles will we accomplish in one year?
 - When will we meet? How often?
 - Is there money available for us to have substitutes? If now, how can we all observe the lessons?
 - Where will we meet?

How do we create our Research Goal?

- For the content, use DATA!!!
 - What is a concept that is difficult for students?
 - What is a concept these students did not understand, based on the CST or Benchmark Assessments?
- For the behavior, create a Learner's Profile. Determine the gaps and use one of the gaps that will get the "biggest bang for the buck"!

Activity: Successful Learner's Profile

- Think about the profile of a successful learner.
- What characteristics/behaviors would they have that contribute to their success?
- What are, "the personal qualities that contribute to the student's motivation and learning" ?

Activity: Actual Learner's Profile

- Think of a learner in your class that represents the average learner.
- What characteristics/behaviors does this learner possess?

Activity: Research Goal

- Based on the two charts, where are there gaps?
- What would be the behavior that will contribute the most to student learning?
- How could we write this as a behavioral goal for the year?
- How could we tie this goal in with an academic content goal?

Lesson Study: Vineyard Elementary Grade 5

- Research Goal: We want our students to be willing and able to:
 - Interpret functions through various representations (e.g. function table, graph, pictures, manipulatives, algebraic expressions and equations) to solve word problems.
 - Explain math problems, algorithms and attempted solutions in any way that makes sense to the audience.

Interpreting Graphs RL

- Math Content for Lesson:
 - Creating and interpreting graphs in context.
- Learning Targets:
 - Students will create graphs from situations (either physical or written) in context.
 - Students will use information taken from a graph to answer questions about a problem situation.
 - Students will write stories for a graph in context.

Interpreting Graphs RL

Misconceptions:

- Students will switch the coordinates (or axis).
- Students have a hard time translating the word problem to a graph (and vice versa).
- Students will try to graph the line to trace the person moving instead of the relationship of time and distance.

Please read the RL

- What do you notice?
- What are the strengths of this process?
- Where is the focus?
- Is it scripted?
- Please note this is not a “perfect lesson”, nor a final document meant to be published in mass.

What Research Says

- Lesson study improves instruction through the refinement of lesson plans.
- Lesson study strengthens three pathways to instructional improvement: teachers’ knowledge, teachers’ commitment and community, and learning resources.

Lewis, C., Perry, R., & Murata, A.
Educational Researcher, April 2006

What Teachers Say

- “The learning was so much more effective this time, it wasn’t about teaching, it was about learning.”
- “This is the first time ‘collaboration time’ has been true to it’s title!”
- “We are only as effective as our level of understanding. We have to keep pushing ourselves into the ‘why’, the ‘how come’, that’s the challenge.”

References

- <http://www.lessonresearch.net>
- Lewis, C. (2002) Lesson Study: A Handbook of Teacher-Led Instructional Change.
- Stepanek, J. & Appel, G. (2007) Leading Lesson Study: A Practical Guide for Teachers and Facilitators.

Questions?

Thank you for your time!

For more information, please contact:

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